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April 2, 1954

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Chief, WE

Attention:

INFO

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Proposed Equipment and Method for Sealing Materials To
Be Cached

REF: OWOA-1058, 15 January 1954

1. In order to overcome the shortcomings in caching materials and techniques, apparent in the report on cache damage attached to reference, Headquarters has consulted its technical experts, who advocate the use of a hot plastic dip for sealing most materials to be cached. This method involves the use of specialized equipment (a melting-dipping tank unit and generator), and techniques as indicated in the specifications and pamphlets attached. All materials and equipment can be treated by this method with the exception of explosives. In the opinion of Headquarters experts, these would be foil-wrapped and then placed in stainless steel containers. Headquarters proposes to forward samples of the latter to the Stations for inspection and examination as soon as they are available. It is, however, not considered necessary to place any of the PE into containers of this kind, unless, in the field's opinion, such additional protection is warranted in specific localities by evidence of damage or deterioration of the PE upon cache inspection. Headquarters would also propose to leave to the discretion of the field and [] the decision whether all cached equipment and materials should be treated by this method within the near future, or whether it would be preferable to use it over a period of time and in the course of routine inspection of caches. It is requested that Headquarters and [] on the basis of the formulas contained in the attached specifications, be given an estimate of the total amount of plastic and the total number of steel containers needed, as well as an indication of the desired phasing of delivery if it should prove to be undesirable to have the total amount delivered at one time.

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2. On the assumption/

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LO/SD/FS _____

TSS/MD () _____

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C/WE

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2. On the assumption that it might be found desirable to do the necessary repackaging and dipping at the caching sites where there is presumably no local electric power available, a 3-KW motor-generator has been included on the equipment list as a self-contained power source for the unit. In this case, all the equipment can be mounted and used on a truck. If, however, it is decided to transport all materials and equipment to be cached to a central point for sealing by this method, the motor-generator can be eliminated as a necessary item if so desired. The unit can be wired for whatever power source the field specifies.
3. The [] is requested to obtain [] opinion concerning this equipment and method. Moreover, if [] is able to supply this kind of equipment, can provide the necessary training in its use, and prefers to do so, Headquarters has no objections. It is also possible that [] knows of or has developed a method which it considers superior to the one proposed above by [] technical staff. In that case, Headquarters would expect to be informed in detail and would be glad to approve it for use in the field if examination by Headquarters resulted in a favorable evaluation. 25X1
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4. Headquarters requests that the [] propose to [] that the cost of this equipment and necessary materials be borne equally by [] and []. The Norwegians should not, in Headquarters opinion, bear any part of the cost of materials. Should [] be unwilling to share the cost on any basis, [] is prepared to bear the full cost, since [] supplied the bulk of the caching materials used, some of which have now proved to be less than satisfactory. However, in this case Headquarters would expect to furnish its own equipment. Whenever the [] has secured [] agreement to the use of this equipment, on whatever basis, it is requested that Headquarters and the [] be informed so that the [] representatives may in turn jointly inform the [] and discuss details with the [] personnel. The [] is then requested to inform Headquarters and [] decision in regard to the use of this equipment. 25X1
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5. The [] will note that the separate specifications attached refer to a special model considered more suitable in size for [] purposes than the regular models described in the pamphlet attached as Enclosure No. 3 []. Furthermore, since the motor generator on this list, and referred to in paragraph 1, is both expensive and heavy, Headquarters would like to know whether [] has available or can procure a 3-KW motor-generator. In Headquarters' opinion, this would be clearly preferable. Headquarters also wishes to point out that the normal plastic material used in this method attracts fungus growth, and that rodents find it palatable. As evident from the attached specifications, the type of plastic which contains copper sulfate, while appreciably more expensive per pound, is fungus-resistant and rodent-repelling. Despite the higher cost, the field may find it desirable to specify that all or part of the plastic be of this latter type. It is requested that the field's estimate of plastic/ 25X1
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of plastic/

[redacted]
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of plastic needed include an indication as to which kind is desired.

6. On the assumption that the [redacted] will agree to the use of the equipment and method which may be jointly or unilaterally proposed, it is then also thought necessary and desirable to select one [redacted] individual for training at [redacted] facilities in its use. This individual would require top secret clearance and should be able to speak English. A field check and PRQ should be initiated as soon as possible. Training is expected to last from one to two weeks. [redacted] would be prepared to bear the travel and living costs incurred by this person. 25X1
7. The [redacted] are requested to expedite this matter so that, provided there is over-all agreement on using this method, procurement of all necessary equipment can be initiated in time for its use during this coming summer's intended cache inspections and repackaging of damaged materials and equipment. 25X1

[redacted] 25X1

16 March 1954

Enclosures:

1. Specifications [redacted] 25X1
2. Preservation, Packaging, and Packing, etc [redacted] 25X1
3. Seal-Peel Guide [redacted] 25X1

Distribution:

- 3 - [redacted], w/encls as noted 25X1
1 - [redacted] w/encls as noted
2 - WE-1/PP, w/encl 1
1 - WE-6, w/encl 1
1 - RI, w/encl 1
1 - TSS/MD
1 - WE/LO

WE-1/PP/GJM:rrm

Routed: [redacted] 25X1

Enclosure No. 1

To

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A. Specifications of Seal-Peel Brand Melting Tank, Model 715 CL
Special Wired for 60 cycle, 110 volt

Approximate Size of tank:

Length 38"
Width 20" (The tank holds approximately 60 lb. of plastic)
Depth 24"
Dipping area 7" W x 15" L x 12" D
Pre-melt will be made with removable dam and plate and base
Plate 7" x 5" x 12"
1 - DIC thermostat to control the dipping area
1 - BIO thermostat to control the pre-melt and pumping system
3 - Pilot light assemblies
1 - 1/4 H.P. motor, 60 cycle, 110 volt
1 - Recessed disconnect with male and female plug in connections

Hinged lid with locking belts

1 - Drain Valve - removable

All controls mounted in recessed panel with locked door

(Instructions for operation to be on the interior of the door)

The entire assembly will be mounted on metal skids for easy
handling and loading.

Cost: \$785.00

Total Gross Weight: 350[±] lbs.

Power Consumption: 26+ amps at 60 cycle 110 volt

Delivery time: 2 to 3 weeks from receipt of order

B. Generator:

Fairbanks-Morse 3 KW (Military Type)

Diesel-powered

Weight: 600[±] lbs.

Dimensions: 6' x 3¹/₂' x 4'

Cost \$1250.00

C. Materials:

Plastic in 10 lb. blocks (12" x 12" x 1")

(5 to a box of 12" x 12" x 6", weight of box, 50 lb.)

Cost per lb.: \$0.53. (\$0.87 per lb. if copper sulfate included as
anti-fungus and anti-rodent protection)

Temperature range: -70° F. to +250° F.

It takes about 100 lbs. of plastic per volumetric ton (40 cu.ft.).

D. Steel Containers:

Maximum cost: \$30.00.

Dimensions: 6" x 9" x 16¹/₂"

Weight: 8 lbs.

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